

Bureau of Environmental Health
 7178 Gateway Drive Columbia, MD 21046
 (410) 313-2640 Fax (410) 313-2648
 TDD (410) 313-2323 Toll Free 1-866-313-6300
 website: www.hchealth.org

Maura J. Rossman, M.D., Health Officer

RECEIPT DATE: 7/14/14 **ONSITE SEWAGE DISPOSAL SYSTEM**

P 554540

INSTALLATION APPROVAL DATE: 9/23/2014

**PERMIT
CONSTRUCTION**

A _____

PROPERTY ADDRESS: 13026 High Grove Road

SUBDIVISION: Schooley Mill Farm LOT: 6 TAX ID: _____

CONTRACTOR: _____ EMAIL: _____

CONTRACTOR ADDRESS: _____ PHONE: _____

PROPERTY OWNER: _____ EMAIL: _____

OWNER ADDRESS: NVR Inc. PHONE: 410-379-5956
9720 Patuxent Woods Drive, Columbia, MD 21046

BAT UNIT MODEL: Hoot 600 BNR BAT UNIT SIZE: 600 GPD

PUMP CHAMBER CAPACITY (GALLONS): _____ PUMP SIZE: _____

NUMBER OF BEDROOMS: _____ HOUSE SQ. FT. _____ APPLICATION RATE: _____

DISTRIBUTION SYSTEM: GRAVITY FED LOW PRESSURE DOSED

TRENCHES:	LINEAR FEET REQUIRED: <u>See Bat Plan 110</u>	INLET DEPTH: <u>See Bat Plan 4</u>
	TRENCH WIDTH: <u>See Bat Plan 3'</u>	MAXIMUM BOTTOM DEPTH: <u>See Bat Plan 7</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>See Bat Plan</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>See Bat Plan</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	Set BAT unit per plan. Set distribution box per plan. <u>2x55'</u> Install trenches per plan.	

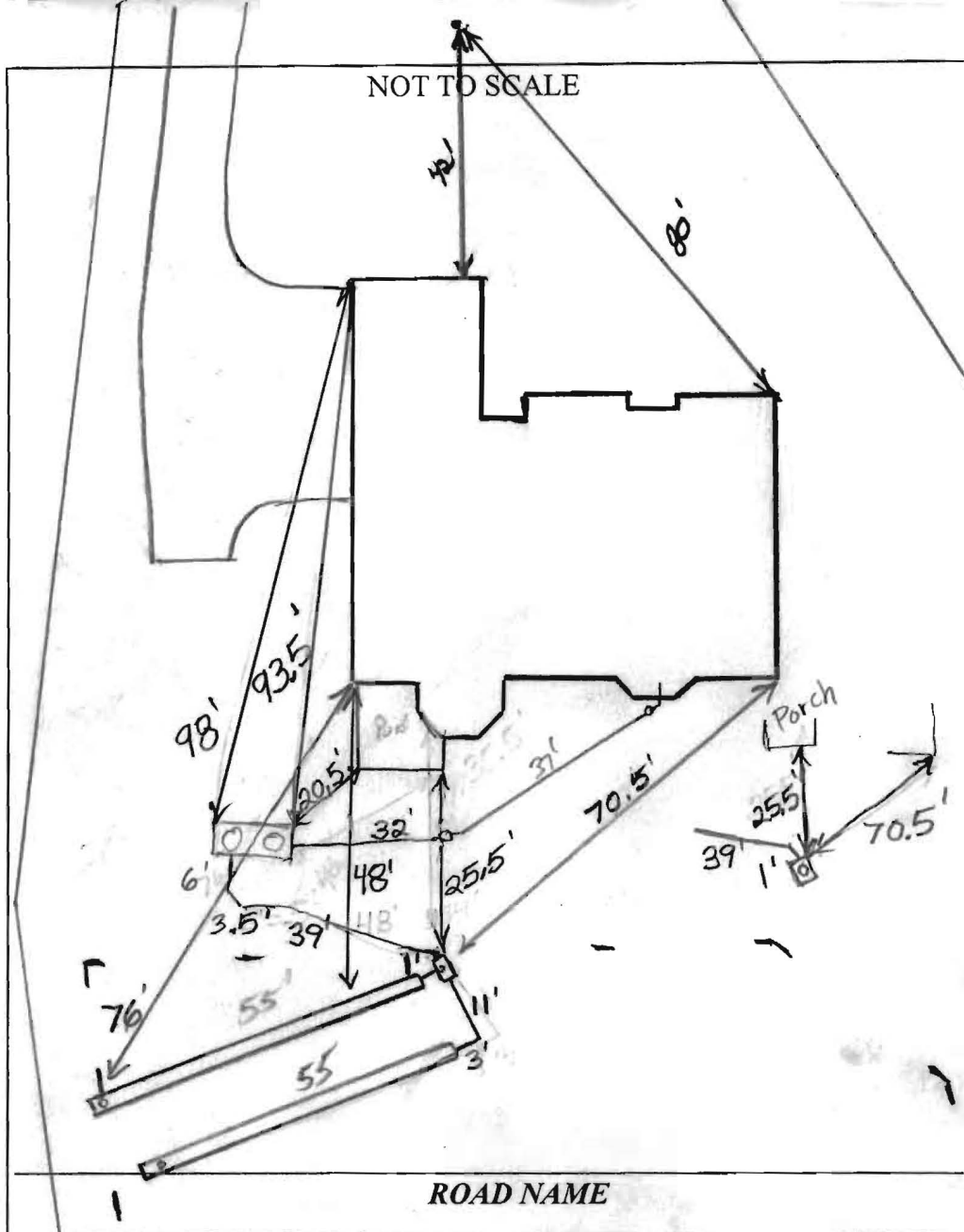
ISSUED BY: Jeff Williams ISSUE DATE: _____ EXPIRATION DATE: 7/14/15

- NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION
- NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING
- NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.
- NOTE: WATERTIGHT SEPTIC TANKS REQUIRED
- NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADIENT FROM ANY WATER WELL
- NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS
- NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM.

PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.

CALL 410-313-1771 TO SCHEDULE INSPECTIONS.



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
3'	4'	7'
NUMBER OF TRENCHES		2
TOTAL LENGTH		110'
ABSORPTION AREA		330+ Sidewall
DISTRIBUTION BOX LEVEL		Yes
DISTRIBUTION BOX BAFFLE		Elbow
DISTRIBUTION BOX PORT		Yes

SEPTIC TANK DATA	
SEPTIC TANK I LEVEL	Yes
MANUFACTURER	Mayer Bros-HOOT
CAPACITY	2000 GAL
SEAM LOC	Top
TANK LID DEPTH	3.5'-4'
BAFFLES	Front
BAFFLE FILTER	N/A
MANHOLE LOC	Front+Rear
6" PORT LOC	None
WATERTIGHT TEST	No
SLOTTED	N/A
DATE ON LID	Dry
PUMP/SEPTIC TANK LEVEL N/A	
MANUFACTURER	
CAPACITY	
SEAM LOC	
TANK LID DEPTH	
BAFFLES	
BAFFLE FILTER	
MANHOLE LOC	
6" PORT LOC	
WATERTIGHT TEST	
SLOTTED	
DATE ON LID	

Traffic Bearing

PRE-CONSTRUCTION:

7/25/14 BAT unit location staked. Set BAT per staked location. Install 2x55' trenches as shown on site plan. Dbox to be set @ top center of SRA. Call for inspection (KW)

INSTALLATION: 7/31/14 Trenches installed per layout. No BAT unit. (KW)

8/7/14 On site. House sewer not coming out per approved BAT site plan. Told contractor BAT site plan needs to be revised. Provider will not support existing sewer out location. BAT unit location must be changed (KW)

8/20/14 Sewer line run up to original BAT stake location. Tank will be approx 5' in ground. BAT manufacturer is OK w/ the depth. Need a copy of letter stating this (KW)

9/8/2014 Tank set. Connections made to house and dist. box. Need verification

FINAL INSPECTOR B. Baker DATE OF APPROVAL 9/23/2014

that HOOT unit is working correctly. (BB)

Williams, Jeffrey

From: Williams, Jeffrey
Sent: Friday, April 11, 2014 10:29 AM
To: 'Dave Harward, III'
Cc: Bricker, Robert
Subject: Schooly Mill

Hi Dave. I reviewed the Schooley Mill plans. I had Andrew review them and I apologize that I didn't catch the following issues for lot 7 and 9 on earlier reviews. I was focused on the septic design that I missed the well problem. Lot 9 wellbox is within the 30' setback to the house location. Lot 7 wellbox is within the 10' setback to the driveway.

For lot 6, it looks like on the site plan that you moved the proposed graded swale over to keep the tank on the side slope, but the septic profile still shows the proposed grade with the swale directly over the tank. I think the profile may need to be updated to match the new proposed grading?

Otherwise, for all lots the approved trench bottom depth is 7', but on all you have trench bottom depths at 8'. Also, we need the trench invert elevations for all. We also need the trenches within each system to be exactly equal length. I don't think that will be a problem on any of these. What is helpful to us is to include a chart or note indicating the trench depths and specs. I've attached a copy of an example that we like.

Also, I've learned that the Hoot system pump probes are at set locations, but the length of time the pump is on can be programmed, which is what gives the dose. I had asked for an elevation of the pump on float and a dose volume. We didn't get the pump elevation on these revised, but what we could get is a note under the dose stating the run time correlating to the rate of the pump selected that matches the dose given. A rule of thumb for a dose going to a d-box could be about 1/6 design flow or around 100g. For example, lot 7 has a pump with a rate of 53gpm. You could specify a dose of 106g and a runtime of 2 minutes.

I know these have had a few revisions. If you prefer, we could schedule a meeting to make sure everything is as we need it for approval prior to the next submission so that we can move forward. Let me know. Thanks
Jeff

Jeff Williams
Program Supervisor, Well & Septic Program
Bureau of Environmental Health
Howard County Health Dept.
410-313-4261
jewilliams@howardcountymd.gov

CONFIDENTIALITY NOTICE

This message and the accompanying documents are intended only for the use of the individual or entity to which they are addressed and may contain information that is privileged, confidential, or exempt from disclosure under applicable law. If the reader of this email is not the intended recipient, you are hereby notified that you are strictly prohibited from reading, disseminating, distributing, or copying this communication. If you have received this email in error, please notify the sender immediately and destroy the original transmission.

Williams, Jeffrey

From: Williams, Jeffrey
Sent: Thursday, April 03, 2014 1:59 PM
To: 'Dave Harward, III'
Subject: RE: Schooley Mill Lots 6, 7, & 9

We reviewed Schooley Mill lots 4,5,6,7, and 9. Following are comments:

- All of the plans need to show the pump on elevation and dose volume.
- All plans need to show trench details: ground elevation, invert elevation, bottom elevation for each.
- Lot 6: hoot tank location is in the middle of a proposed swale. They could move it over right by perc hole 1663.
- Lot 7: the building permit states 5 bedrooms, you revised the plan down to 4 bedrooms
- Lot 9: the sewer grade states 7%, but is really 4.7% (FYI, anything greater than 5% should level off to 2% in the last few feet before the tank)
- Lot 9: the d-box should go at the top edge of the easement for an end feed to the trenches.
- Lot 4: the d-box should go to the corner of the easement for end fed trenches.

From: Dave Harward, III [mailto:DaveH@fcc-eng.com]
Sent: Monday, March 24, 2014 11:16 AM
To: Williams, Jeffrey
Subject: Schooley Mill Lots 6, 7, & 9

Jeff,

I just had Frank from our office bring down BAT Installation Site Plans for Lots 6, 7, & 9. I will get you new plans tomorrow that have a couple of minor things we omitted. First, the plans you are getting today are not signed and sealed by an engineer. The other thing is that Robert Bricker had sent a memo that he also wanted to see the blower & control panel locations shown on the plan. Generally these will be shown at the closest corner of the house to the tank. We will add that to the plans that I send to you tomorrow. So you may want to discard the plans I've sent today. Frank was in a rush to get going, so we rushed these out a little earlier than I'd have liked to. Also, I'll just mention that the no. of bedrooms on Lot 7 per the trench design was for a 5 bedroom house. So we have revised the length for a 4 bedroom house.

So I'll get you new prints for these 3 lots tomorrow.

Thanks,

Dave Harward
Fisher, Collins, & Carter, Inc.
Centennial Square Office Park
10272 Baltimore National Pike
Ellicott City, Maryland 21042
Ph. 410-461-2855, Ext. 1818



MAYER BROS., INC.

Precast Concrete Products
6264 Race Rd. Elkridge, MD 21075

Letter of Satisfaction Hoot System Installation

Address of Property: 13026 Highgrove Rd.
Highland, MD 20777

Date of Final Inspection: 9/19/14

Installer: South Carroll Backhoe Service

Hoot Technician/Inspector: Mike Sample

I hereby certify that the Hoot system installed at the property listed above has been installed according to proper Hoot installation practices. I have also verified the startup of the system and it is in proper working order.

Sincerely,

H. Michael Sample

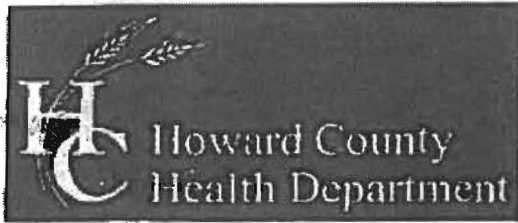
Name of Inspector
Mayer Bros., Inc.

PH: 410-796-1434
FX: 410-796-1438

WBE
NPCA Certified Plant

mayerbro@connext.net
www.mayerbrosprecast.com

Grease Interceptors, Grease Solutions, Aerobic Treatment Units, Septic Tanks, Holding Tanks, Storm Water Structures, Hydroceptors,
Bench Barrier, Water Meter Vaults, Sectional Valve Vaults, Top Slabs, Curb Heads, Curb Bumpers, PennEntry Basement Entries,
Scapewel Window Wells, Custom Precast Products



Bureau of Environmental Health
 7178 Columbia Gateway Drive, Columbia, MD 21046-2147
 Main: 410-313-2640 | Fax: 410-313-2648
 TDD 410-313-2323 | Toll Free 1-866-313-6300
 www.hchealth.org
 Facebook: www.facebook.com/hocohealth
 Twitter: HowardCoHealthDep

2

000151

000094

Maura J. Rossman, M.D., Health Officer

LIBER 15404 FOLIO 404

Re-record
 correct ADDRESS

**OPERATION AND MAINTENANCE AGREEMENT
 FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM
 HAVING AN ADVANCED PRE-TREATMENT SYSTEM**

THIS AGREEMENT is made this 18th day of November, among
NVR Inc., hereinafter collectively referred to as
 "Owner", and the Howard County Health Department hereinafter referred to as the
 "County".

* 13026 Highgrove Road

WHEREAS, Owner is the owner or contract owner of a parcel of land located at
 * 13026 Hall Shop Road, Highland, Maryland, 20777, in the 5th Election District of Howard
 County, Maryland, and the deed to same is recorded or shall be recorded among the Land
 Records of Howard County, Maryland in Liber 10230 Folio 0067B.

20
 40
 DS

WHEREAS, The Lot is suitable for the installation of a conventional on-site sewage
 disposal system with an advanced pre-treatment system, utilizing best available
 technology to perform nitrogen reduction, in accordance with the Code of Maryland
 Regulations 26.04.02.07, effective January 1, 2013.

NOW, THEREFORE, the parties hereto agree as follows:

- A. Owner hereby grants to the County the right to enter upon the Lot at any reasonable time for access to the system to make periodic inspections and the Owner agrees to provide any information and data in Owner's possession reasonably requested and needed by the County to develop accurate and thorough test results.
- B. Owner acknowledges and agrees that neither the County nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.
- C. The Owner will devote reasonable care and effort to the operation and maintenance of the system in perpetuity or until a public sewer connection is made so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.
- D. The Owner agrees to enter into a contract reasonably acceptable to the Owner and the County with a private entity to operate and maintain on a regularly scheduled basis an approved advanced pre-treatment system. The owner shall supply a copy of the contract to the County when it is renewed or altered.
- E. This agreement shall run with the land and upon Owner's taking title to the Lot shall bind the Owner, their heirs, successors, and assigns to the provisions of the agreement as

LIBER 15391 FOLIO 215

long as the property is in existence and after installation of the system. Owner further agrees that they shall inform in writing any subsequent purchaser or lessee of the Lot that the system shall require maintenance or other attention. Upon taking title to the Lot, the Owner agrees to cause this agreement to be recorded in the Land Records of Howard County and assure that it becomes part of the Deed for the subject property in order that prospective buyers may be aware of the special conditions affecting this property.

F. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take any other action which is now or may hereafter be within its authority.

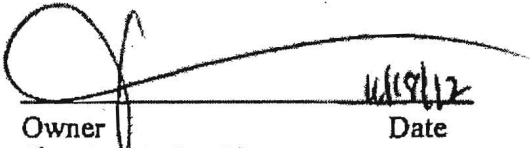
G. This agreement may be voided at any time at the discretion of the County.

H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.

I. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

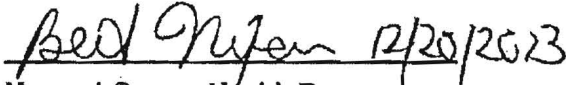
J. Owner acknowledges and agrees that interior renovations to increase the number of bedrooms or an increase in living space shall not be permitted without approval from the County.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above.


Date 11/19/12

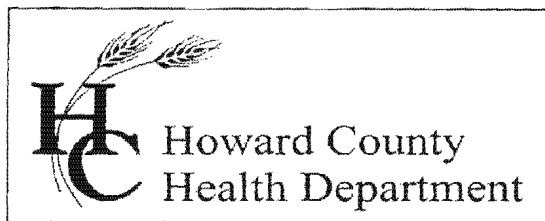
Owner
Timothy C. Naughton
NVR INC.

Owner _____ Date _____


Howard County Health Department

LR - Recording Fee (No Taxes) 20.00
Grantor/Grantee Name: Ho Co Health Depart
Reference/Control #: 04
LR - Surcharge 40.00
SubTotal: 60.00
Total: 180.00
#2343818-1 10:35
01/06/2014 CC13-05
#2343818-00503 -
Howard Co
Columbia/CO05-03-04 -
Register WA 496

LR - Agreement 20.00
Recording Fee
Grantor/Grantee Name: NVR
Reference/Control #: 151
LR - Agreement Surcharge 40.00
SubTotal: 60.00
Total: 180.00
#2312725-5 01:11
12/28/2013 CC13-NH
#2312725-00503 -
Howard Co
Columbia/CO05-03-02 -
Register 02 404



Bureau of Environmental Health

8930 Stanford Blvd., Columbia, MD 21045
Main: 410-313-1771 | Fax: 410-313-2648
TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org
Facebook: www.facebook.com/hocohealth
Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

Date: January 13, 2014

To: Jim Kerwin, Applicant
Jim@decaturbuildingservices.com

RE: Best Available Technology (BAT) Site Plan and BAT denitrification unit required at 13026 High Grove Road, (Schooley Mill Farm, Lot 6)

Dear Mr. Kerwin,

Please be advised that a best available technology (BAT) denitrification unit is required for treatment of wastewater discharge from the proposed dwelling at 13026 High Grove Road.

A BAT Site Plan is required for Health Department approval of the Building Permit Application (B13004520). The BAT Site Plan must be submitted directly to the Health Department and approved prior to release of the septic system installation permit. This plan should be created by your engineer. I have enclosed a document listing the required content for a BAT Site Plan.

I am also attaching an Operation and Maintenance Agreement that the owner must complete, sign and submit at our Bureau desk. Our Bureau Director will then sign the agreement, and the owner will hand-carry the signed document first to the Howard County Finance Department and then to Howard County Land Records where the agreement will be recorded. We can release the septic system installation permit when we have a receipt by Land Records that indicates the agreement has been submitted for recordation. The Health Department requires a copy of the recorded document for Use and Occupancy approval.

Should you have any questions concerning this matter, you may contact me by calling 410-313-2691.

Respectfully,

Robert Bricker, REHS/R.S., L.E.H.S.
Environmental Sanitarian, Well and Septic Program
Howard County Bureau of Environmental Health

Enclosures (2)
Copy: file

HIGHGROVE ROAD

PUBLIC ACCESS PLACE

Approved Septic System Plan
Howard County Health Department

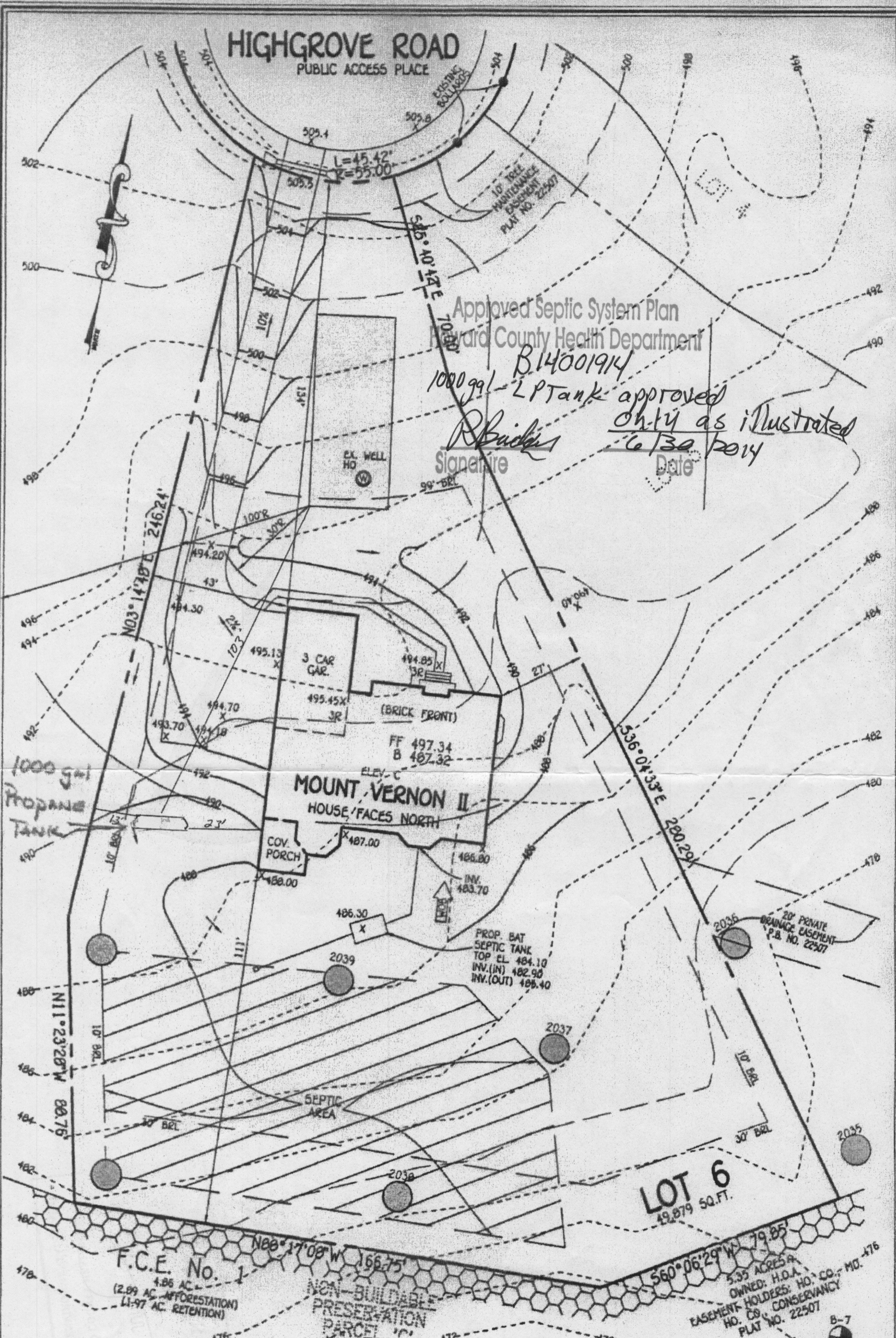
B14001914

1000 gal - 2 PTank approved

only as illustrated
6/30/2014

R. Buden
Signature

Date



F.C.E. No. 1
4.86 AC.
(2.09 AC. AFFORESTATION)
(11.97 AC. RETENTION)

NON-BUILDABLE
PRESERVATION
PARCEL 'C'

5.35 ACRES
OWNED: H.O.A.
EASEMENT HOLDERS: HO. CO., MD.
HO. CO. CONSERVANCY
PLAT NO. 22507

PERMIT PLAN LOT 6 SCHOOLEY MILL FARM

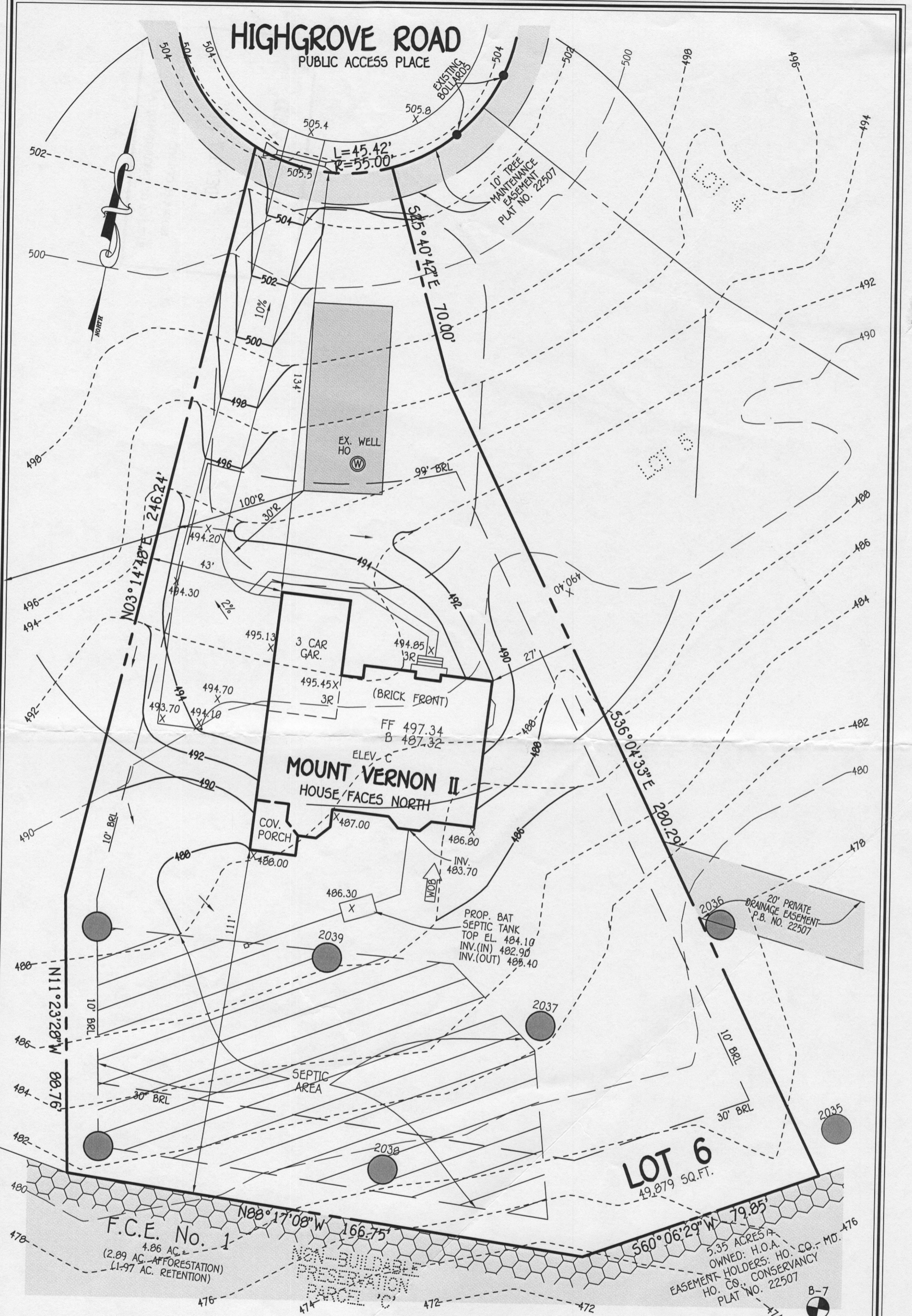
13026 HIGHGROVE ROAD
ZONED: R-ED

TAX MAP NO.: 40 PARCEL NO.: 115 & 149 GRID NO.: 10 & 14
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: NOVEMBER, 2013

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461 - 2895

HIGHGROVE ROAD

PUBLIC ACCESS PLACE



F.C.E. No. 1
 4.86 AC. AFFORESTATION
 (2.89 AC. AFFORESTATION)
 (1.97 AC. RETENTION)

NON-BUILDABLE
 PRESERVATION
 PARCEL 'C'

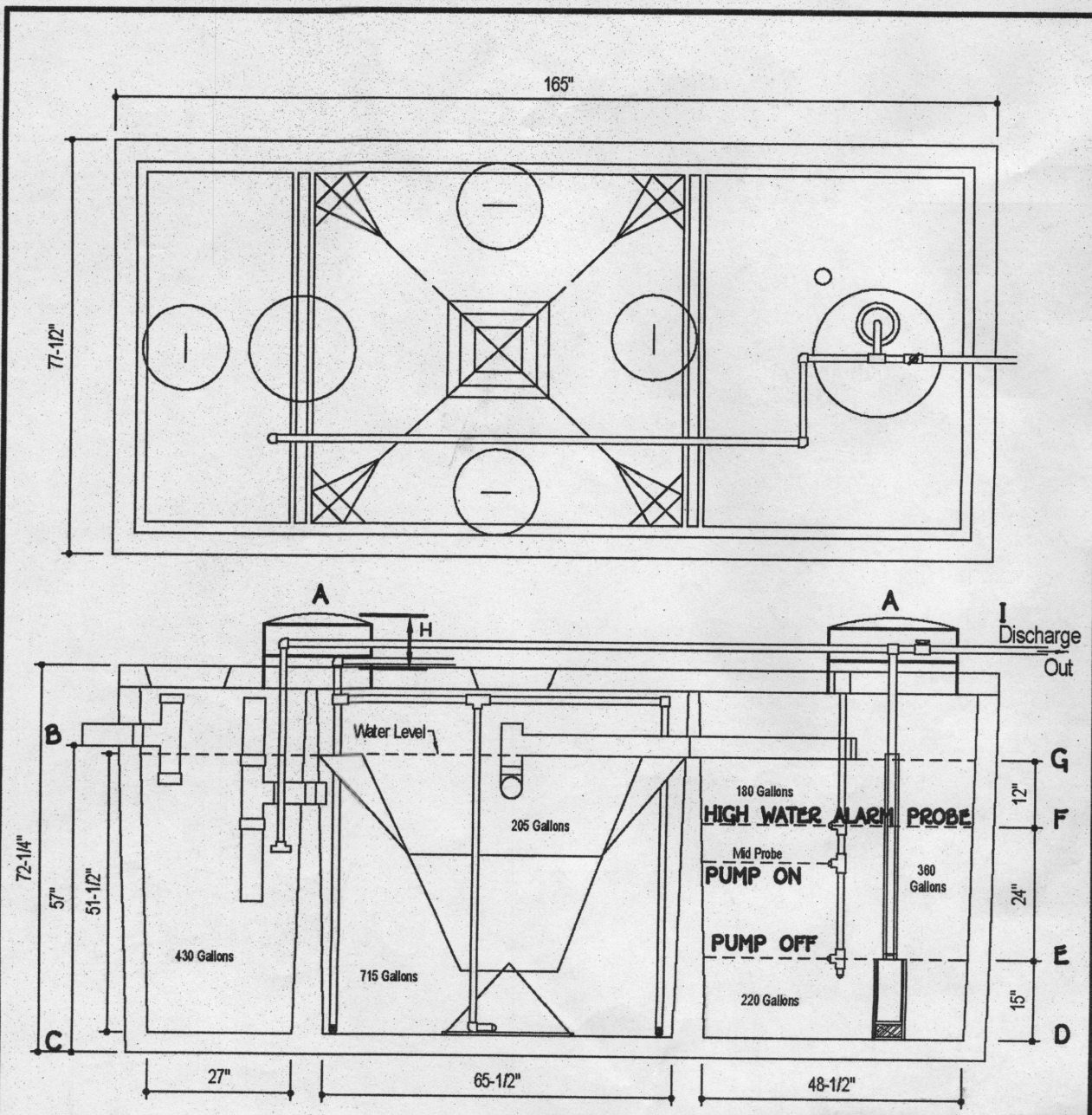
5.35 ACRES ±
 OWNED: H.O.A.
 EASEMENT HOLDERS: HO. CO., MD.
 HO. CO. CONSERVANCY
 PLAT NO. 22507

PERMIT PLAN LOT 6 SCHOOLEY MILL FARM

13026 HIGHGROVE ROAD
 ZONED: R-ED

TAX MAP NO.: 40 PARCEL NO.: 115 & 149 GRID NO.: 10 & 14
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 30' DATE: NOVEMBER, 2013

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461 - 2855



DESIGN DATA & GENERAL NOTES

- Concrete strength 2800 psi, 28 day, density = 150 pcf.
- Concrete - Portland Type III per ASTM C 150-92.
- Reinforcing steel - A305, Grade 60, per ASTM A 618.
- Rebar spacing per ASTM A 618, Min. 5'-0" c/c.

Mayer Brothers, Inc.
6294 Reo Road
Shelton, Maryland 21095
Tel. 410.795.1434
Fax. 410.795.1438
www.mayerbrothers.com

**600 GPD BNR SYSTEM
H-600 BNR**
with 760 GALLON PUMP CHAMBER

Dwg. No. Hoot Form #1 No Scale March 19, 2009

SEPTIC SYSTEM ELEVATIONS

A= 486.60
B= 483.10 (INV. INTO TANK)
C= 478.35
D= 478.68
E= 480.96
F= 481.93
G= 482.93
H= 2.50' (7" MIN.)
I= 485.20 (INV. OUT OF TANK)

FFE = 497.34
BSE = 487.32
INV. OUT OF HOUSE = 483.90
INV. INTO DISTRIBUTION BOX = 482.80
TOP OF TANK = 484.10
DOSE VOLUME = 40 GAL.
DOSING TIMER = 2 MIN.

NOTE:
THE PROPOSED HOUSE IS TO HAVE 4 BEDROOMS.

BAT NOTES

- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM COVER OVER THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 3 FEET. IF COVER EXCEEDS 3 FEET, THEN A TRAFFIC BEARING TANK IS REQUIRED.
- THE BLOWER MAY NOT BE LOCATED MORE THAN 100 FEET FROM THE TANK BASED ON THE MANUFACTURER'S SPECIFICATIONS.
- THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
- THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
- WITHIN ONE MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (INDIC IN A MANNER ACCEPTABLE TO MDE, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.
- ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- AN AGREEMENT AND EASEMENT HAS BEEN COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, LIBER 14780, FOLIO 067.
- THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.
- SURFACE RUNOFF SHALL BE DIRECTED AROUND THE BAT TANK.
- AT HIGH WATER ALARM PROBE, PUMP WILL HAVE CONTINUOUS OPERATION UNTIL LEVEL GOES BENEATH PROBE.
- IF WATER LEVEL RISES ABOVE THE ALARM PROBE, AN AUDIBLE AND VISUAL ALARM WILL SOUND. SEE MANUFACTURER'S SPECS FOR ADDITIONAL INFORMATION.
- ALARM IS TO BE WIRED TO A CIRCUIT SEPARATE FROM THE PUMP CIRCUIT.

SEWAGE DISPOSAL SYSTEM DATA (4 BEDROOMS)

PROP. INVERT AT FOUNDATION WALL: 483.90
1. HOOT 600 BNR (MAX. NO. BDRMS.=5)
EX. GRADE OVER TANK: 488.80
PROP. GRADE OVER TANK: 486.60
INVERT INTO TANK: 494.73 INVERT (DISCHARGE ELEV.) OUT TANK: 496.00

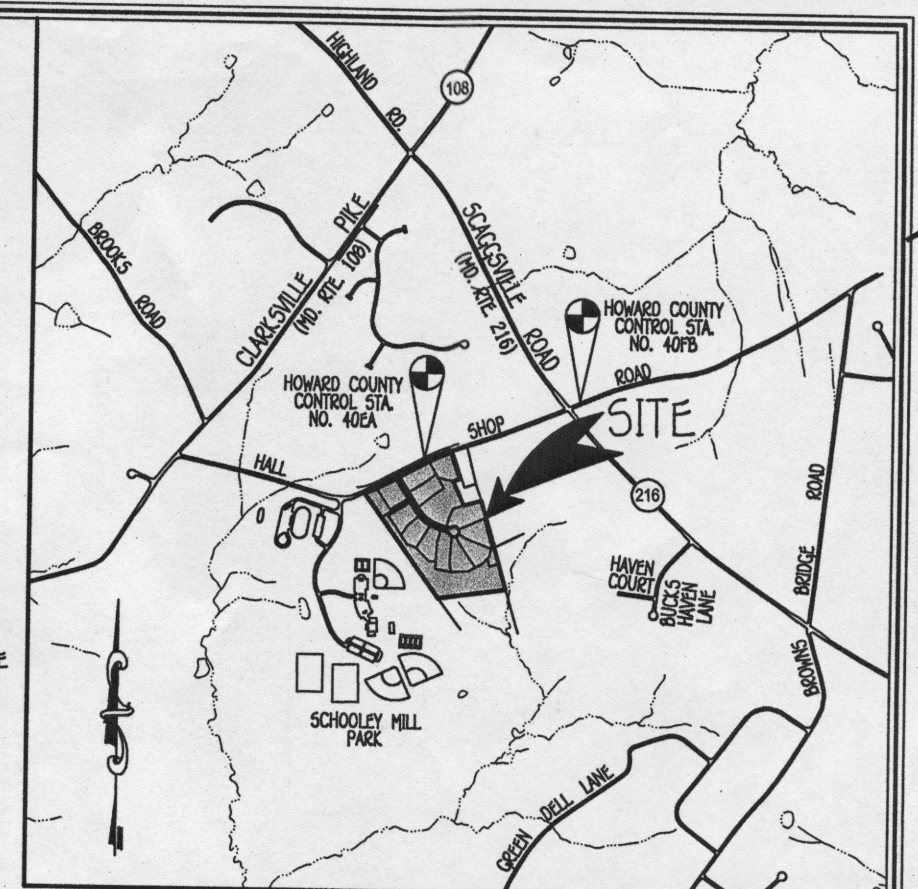
2. DISTRIBUTION BOX:
EX. GRADE: 486.80
PROP. GRADE: 486.60
INVERT IN: 482.80

3. TRENCH DESIGN:
(4 BDRM X 150 GPD/BDRM = 600 GPD)
600 / 1.2 APP. RATE = 500 SF
USE 3' WIDE TRENCH AND 9' MIN. SPACING BETWEEN TRENCH EDGES.
600 SF / 3' WIDTH = 200.00 L.F. X 0.50' = 100' L.F. MIN. TRENCH
USE 2 - 50' LONG TRENCHES = 100' L.F.

TRENCH DATA:

TRENCH 1:
EX. GROUND ABOVE = 486.80
INV. IN = 482.80
BOTTOM TRENCH = 479.80

TRENCH 2:
EX. GROUND ABOVE = 485.90
INV. IN = 481.90
BOTTOM TRENCH = 478.90



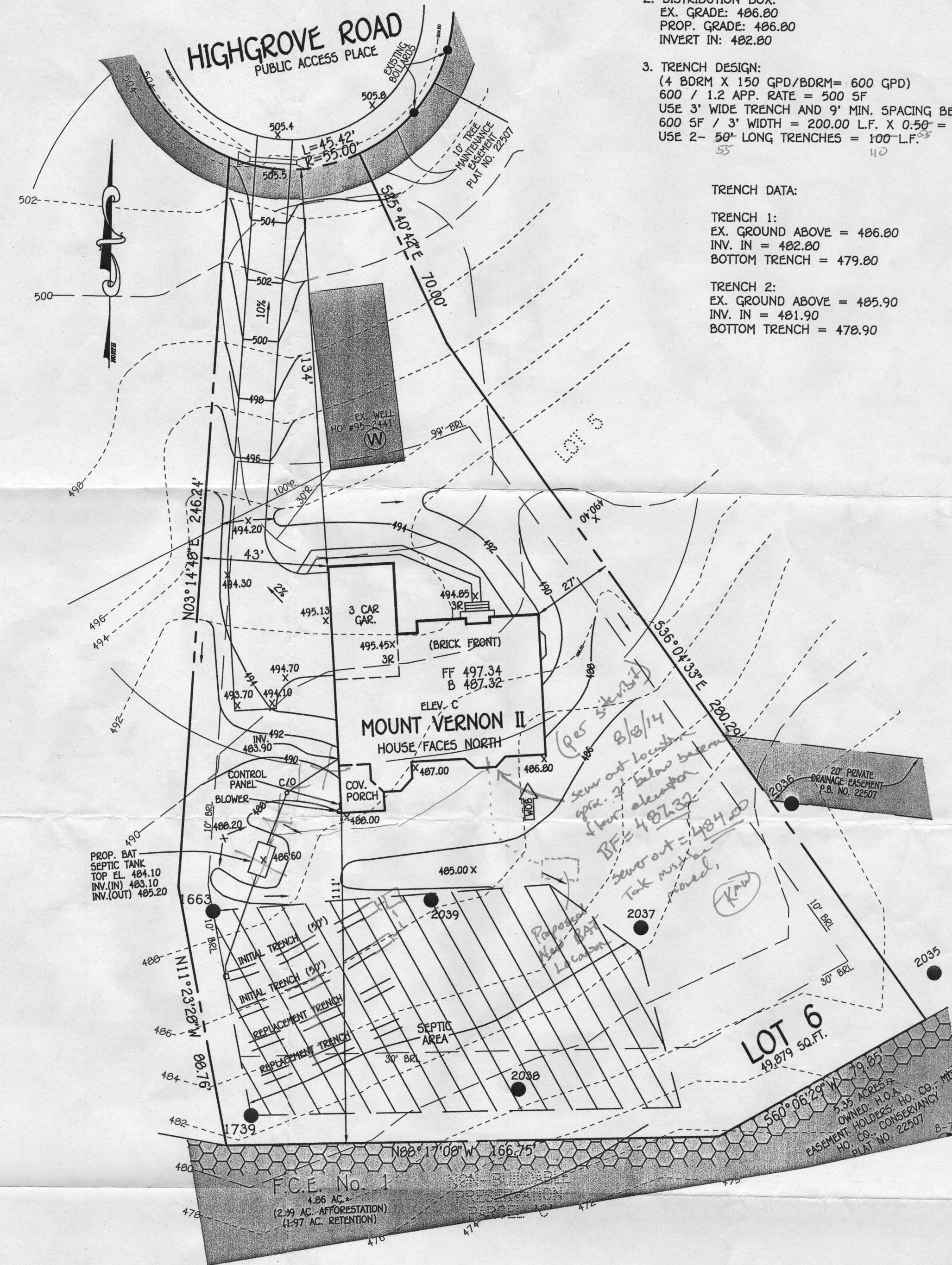
BENCH MARKS

T.P. 406A
N. 947.911.391
E. 1,324.510.091
LOC. NEAR INTERSECTION OF
HALL SHOP ROAD & ENTRANCE
TO SCHOOLEY HILL PARK

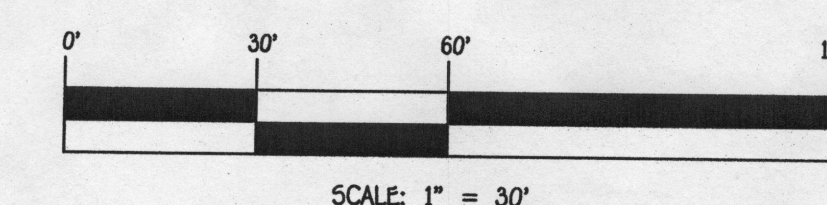
T.P. 407B
N. 948.470.386
E. 1,328.000.805
LOC. NEAR INTERSECTION OF
HALL SHOP ROAD & ENTRANCE
TO SCHOOLEY HILL PARK

VICINITY MAP

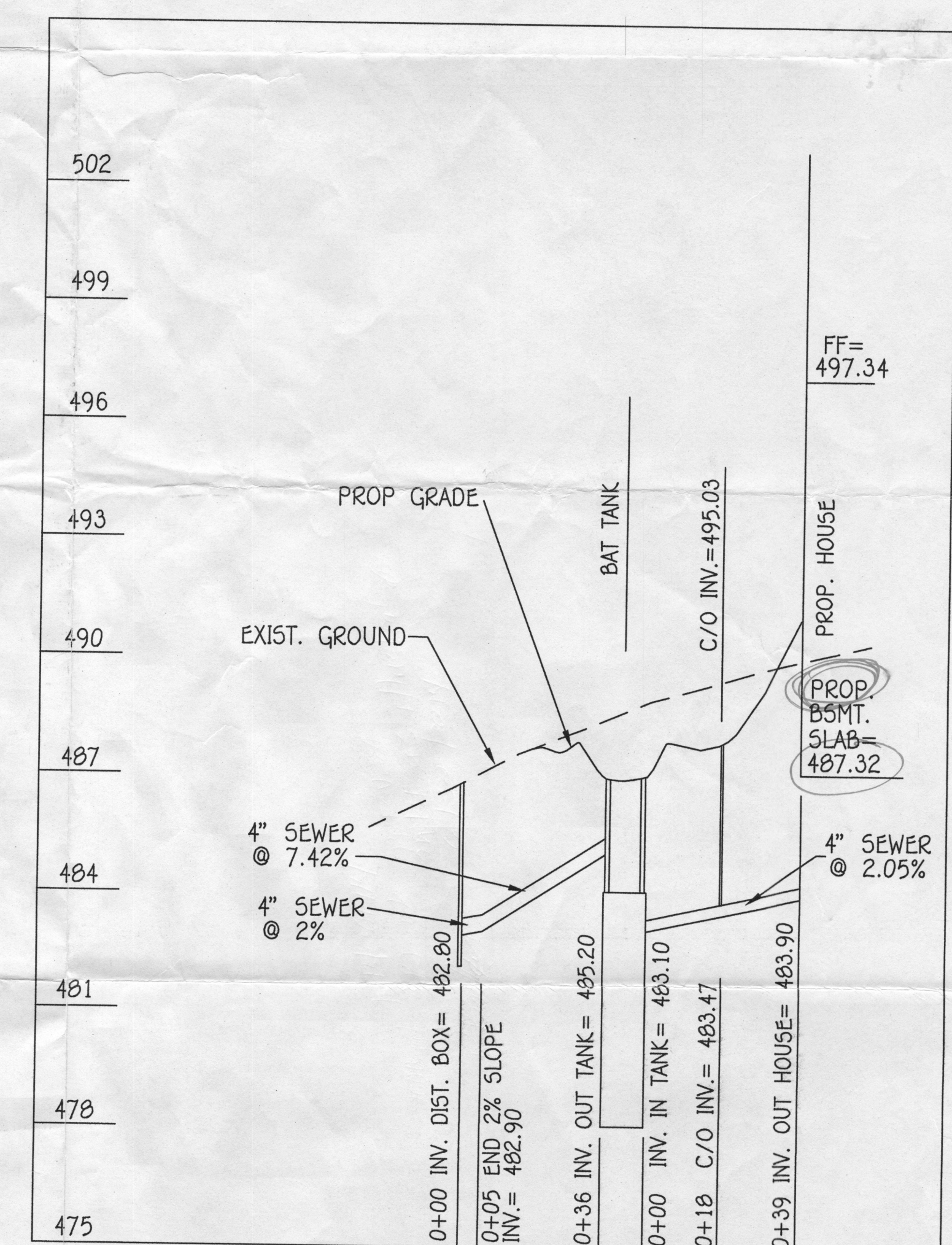
SCALE: 1" = 2000'
HO. CO. ADC MAP NO. 5051,
GRIDS G-3 & G-4 & H-3 & H-4



PLAN
SCALE: 1" = 30'



SCALE: 1" = 30'



SEPTIC SYSTEM PROFILE
SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'

APPLICATIONS
Specifically designed for the following uses:

- Effluent systems
- Homes
- Farms
- Heavy duty sump
- Water transfer
- De-watering

SPECIFICATIONS

- Solids handling capability: 1/2" maximum.
- Capacities: up to 60 GPM.
- Total heads: up to 31 feet.
- Discharge size: 1 1/2" NPT
- Mechanical seal: carbon-rotary/ceramic-stationary, BUNA-N elastomers.
- Temperature: 104° F (40° C) continuous, 140° F (60° C) intermittent.
- Fasteners: 300 series stainless steel.
- Capable of running dry without damage to components.

Motor:

- EP04 Single phase: 0.4 HP 115 or 230 V, 60 Hz, 1550 RPM, built in overload with automatic reset.
- EP05 Single phase: 0.5 HP 115 V or 230V, 60 Hz, 1550 RPM, built in overload with automatic reset.

Power cord: 10 foot standard length, 16/3 SJTW with three prong grounding plug. Optional 20 foot length, 16/3 SJTW with three prong grounding plug (standard on EP05).

Fully submerged in high grade turbine oil for lubrication and efficient heat transfer.

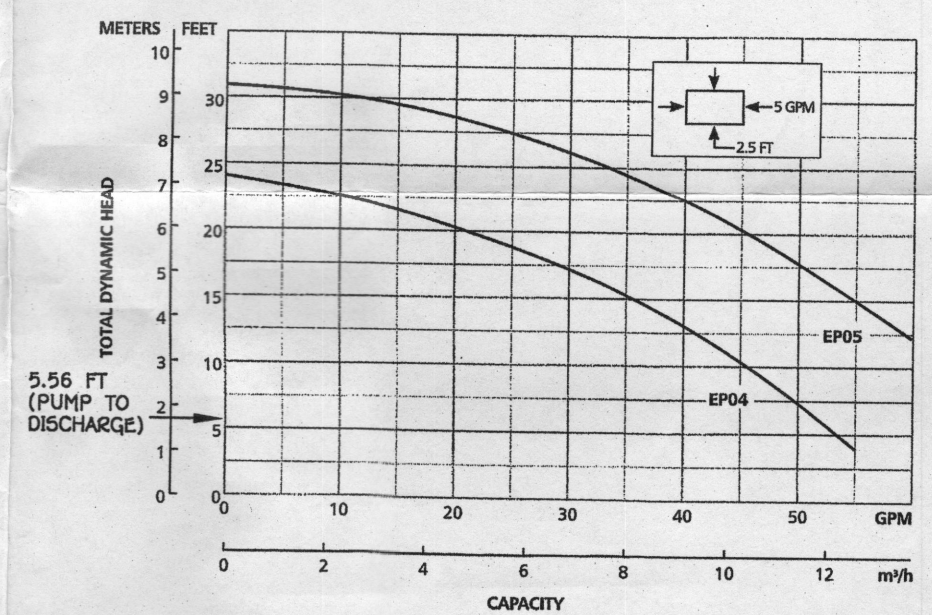
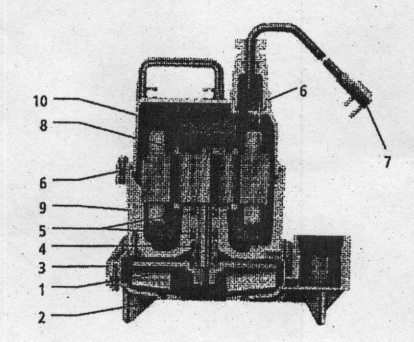
Available for automatic and manual operation.
Automatic models include Mechanical Float Switch assembled and preset at the factory.

PERFORMANCE RATINGS

Total Head (ft. of water)	Gallons Per Minute
5	53
10	46
15	36
20	23
25	0
30	-

COMPONENTS

Item No.	Description
1	Impeller
2	Base
3	Pump Casing
4	Mechanical Seal
5	Ball Bearings
6	O-Rings
7	Power Cord
8	Oil Filled Motor
9	Motor Housing/Spider Assembly
10	Motor Cover



MODEL INFORMATION

Order No.	HP	Volts	Amperage	Minimum Circuit Breaker	Phase	Float Switch Style	Cord Length	Discharge Connection	Minimum On Level	Minimum Off Level	Minimum Basin Diameter	Maximum Solids Size	Shipping Weight (lbs.)
EP0411						Plug / No Switch	10'	1 1/2"	Manual	Manual	15"		20 / 9.1
EP0411A						Plugback / Wide-Angle	10'	1 1/2"	Manual	Manual	12"	6"	21 / 9.5
EP0411F		115	12	20		Plug / No Switch	20'	1 1/2"	Manual	Manual	15"		20 / 9.1
EP0411AC						Plugback / Wide-Angle	20'	1 1/2"	Manual	Manual	12"	6"	21 / 9.5
EP0412						Plug / No Switch	10'	1 1/2"	Manual	Manual	15"		20 / 9.1
EP0412F		230	6	10		Plug / No Switch	20'	1 1/2"	Manual	Manual	15"		20 / 9.1
EP0511F						Plug / No Switch	20'	1 1/2"	Manual	Manual	15"		22 / 10
EP0511AC		115	13	20		Plugback / Wide-Angle	20'	1 1/2"	Manual	Manual	12"	6"	23 / 10.4
EP0512F		230	6.5	10		Plug / No Switch	20'	1 1/2"	Manual	Manual	15"		22 / 10

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 20748, EXPIRATION DATE: 2/22/15.

Aldo H. Vitucci
ALDO H. VITUCCI
4/23/14
DATE



WELL CERTIFICATION:
THE EXISTING WELL, TAG NO. HO-95-2441, HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.

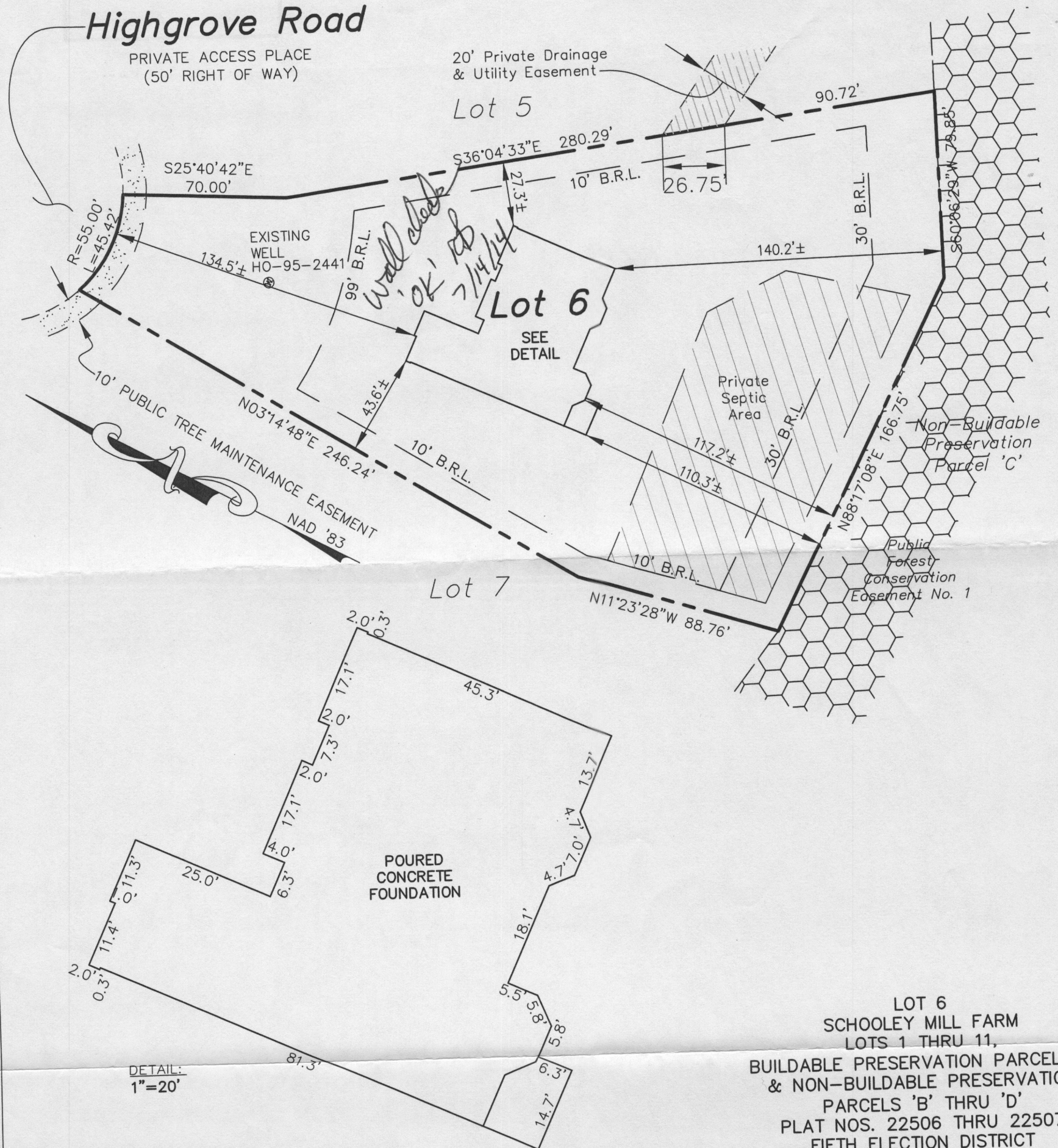
BUILDER/DEVELOPER
NV HOMES
9720 Patuxent Woods
COLUMBIA, MARYLAND 21046
410-379-5996

SCHOOLEY MILL FARM
SITE PLAN FOR BAT INSTALLATION
FOR LOT 6

13026 HIGHGROVE ROAD
Zoned: RR-DEO
Tax Map No. 40; Grid No. 10 & 11; Parcel No. 115 & 149
Fifth Election District - Howard County, Maryland
Date: April, 2014 Scale: As Shown

GENERAL NOTES:

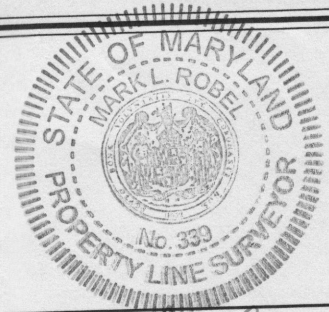
- 1) THIS LOCATION DRAWING IS PREPARED FOR THE BENEFIT OF THE CLIENT SIGNING THE HOUSE LOCATION SURVEY APPROVAL FORM INSOFAR AS IT IS REQUIRED BY A LENDER OR TITLE INSURANCE COMPANY OR ITS AGENTS IN CONNECTION WITH THE CONTEMPLATED TRANSFER, FINANCING OR REFINANCING OF THE PROPERTY SHOWN HEREON. UNLESS INDICATED AS BEING A BOUNDARY SURVEY, THIS LOCATION DRAWING IS NOT INTENDED FOR USE IN THE ESTABLISHMENT OF PROPERTY LINES AND IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATIONS OF FENCES, GARAGES, BUILDINGS OR OTHER EXISTING OR FUTURE IMPROVEMENTS. AS A RESULT, THIS LOCATION DRAWING DOES NOT PROVIDE FOR ACCURATE IDENTIFICATION OF PROPERTY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR SECURING FINANCING FOR RE-FINANCING.
- 2) SUBJECT PROPERTY IS SHOWN IN ZONE X ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP OF HOWARD COUNTY, MARYLAND, COMMUNITY PANEL No. 24027C0140D EFFECTIVE NOV. 6, 2013.
- 3) THE OFFSETS FROM BUILDING LINE TO PROPERTY LINE AS SHOWN ON THE PLAT HEREON ARE TO AN ACCURACY OF PLUS OR MINUS 1'.
- 4) NO TITLE REPORT FURNISHED. SUBJECT TO ALL EASEMENTS, RIGHTS OF WAY AND CONDITIONS OF RECORD.
- 5) THE EXISTING WELL(S) SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-95-2441 HAS BEEN FIELD LOCATED BY FISHER, COLLINS AND CARTER, INC. PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.
- 6) PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROPERTY LINE SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 339, EXPIRATION DATE 10/04/2014.
- 7) BUILDING PERMIT # (B13004520)



#13026 HIGHGROVE ROAD
TOP OF FOUNDATION ELEVATION = 496.1'±

LOT 6
SCHOOLEY MILL FARM
LOTS 1 THRU 11,
BUILDABLE PRESERVATION PARCEL 'A'
& NON-BUILDABLE PRESERVATION
PARCELS 'B' THRU 'D'
PLAT NOS. 22506 THRU 22507
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 461 - 2855



Mark L. Robel
PROPERTY LINE SURVEYOR
REG. #339
DATE: 6/12/14

HOUSE LOCATION DRAWING

FOUNDATION LOCATION: 6/4/14
FINAL LOCATION: _____
BOUNDARY SURVEY: _____

SCALE: 1"=50'
DATE: 6/12/14
DRAWN BY: JMP
CHECKED BY: MLR
PROJECT No.: 05037-6001